Management and				Hydric soils criteria				
Map symbol and map unit name	Component H	ydric	Local landform	Hydric criteria code	Meets saturation criteria	Meets flooding criteria		
Bb:								
BOWBELLS LOAM	BOWBELLS	No						
	NIOBELL	No						
	NISHON NOONAN	Yes No	pothole	2B3,3	YES	NO 	YES	
		Yes	pothole	2B3,3	YES	NO	YES	
	WILLIAMS	No						
BoA: BOWDLE LOAM, 0 TO 3 PERCENT SLOPES	BOWDLE	No						
TERCENT SHOTES	LEHR	No						
	RUSO	No						
	TONKA	Yes	pothole	2B3,3	YES	NO	YES	
Bra: BRYANT-GRASSNA SILT LOAMS, 0 TO 2 PERCENT SLOPES	BRYANT	No						
PERCENT SLOPES	GRASSNA	No						
	1 1	Yes	pothole	2B3,3	YES	NO	YES	
	WILLIAMS	No						
BrB:								
BRYANT-GRASSNA SILT LOAMS, 2 TO 6 PERCENT SLOPES	BRYANT	No						
	GRASSNA	No						
	1 1	Yes	pothole	2B3,3	YES	NO	YES	
** .	WILLIAMS	No						
Ha: HARRIET SILT LOAM	HARRIET	Yes	flood plain	2B3	YES	NO	NO	
HARRIET SILT LOAM	LA PRAIRIE	No						
	RANSLO	No						
He:								
HEIL SILT LOAM		Yes	pothole	2B3,3	YES	NO	YES	
		Yes Yes	pothole	2B3,3 2B3,3	YES YES	NO NO	YES YES	
La:	TONKA	ies	pothole	4B3,3	IES	NO	IES	
LA PRAIRIE LOAM	LA PRAIRIE	No						
-	BOWDLE	No						
	LEHR	No						
	RANSLO	No						
Lb:	HARRIET	Yes	flood plain	2B3	YES	NO	NO	
LA PRAIRIE LOAM, CHANNELED	LA PRAIRIE	No						
	BOWBELLS	No						
		Yes	flood plain	2B3	YES	NO	NO 	
LeA:	RANSLO	No						
LEHR LOAM, 0 TO 3 PERCENT SLOPES	LEHR	No						
	BOWDLE	No						
	TALLY	No						
I OB:	TONKA	Yes	pothole	2B3,3	YES	NO	YES	
LeB: LEHR LOAM, 3 TO 6 PERCENT SLOPES	LEHR	No						
	BOWDLE	No						
	TALLY	No						
	TONKA	Yes	pothole	2B3,3	YES	NO NO	YES	

Map symbol and map unit name MaA: RUSO SANDY LOAM, 0 TO 3 PERCENT SLOPES MbA: MANNING VARIANT LOAM, 0 TO 3 PERCENT SLOPES MdA: MAX-ARNEGARD LOAMS, 0 TO 3 PERCENT SLOPES	Component RUSO BOWDLE TALLY	Hydric ——— No	Local landform	Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding
RUSO SANDY LOAM, 0 TO 3 PERCENT SLOPES MANNING VARIANT LOAM, 0 TO 3 PERCENT SLOPES MdA: MAX-ARNEGARD LOAMS, 0 TO 3 PERCENT SLOPES	BOWDLE	No			·		criteria
MDA: MANNING VARIANT LOAM, 0 TO 3 PERCENT SLOPES MdA: MAX-ARNEGARD LOAMS, 0 TO 3 PERCENT SLOPES MmB: MAX-ARNEGARD-ZAHL LOAMS, 1 TO 6		1					
MANNING VARIANT LOAM, 0 TO 3 PERCENT SLOPES MdA: MAX-ARNEGARD LOAMS, 0 TO 3 PERCENT SLOPES MmB: MAX-ARNEGARD-ZAHL LOAMS, 1 TO 6		No No					
MANNING VARIANT LOAM, 0 TO 3 PERCENT SLOPES MdA: MAX-ARNEGARD LOAMS, 0 TO 3 PERCENT SLOPES MmB: MAX-ARNEGARD-ZAHL LOAMS, 1 TO 6	ı	1.0					
MAX-ARNEGARD LOAMS, 0 TO 3 PERCENT SLOPES	MANNING VARIANT	No					
MAX-ARNEGARD LOAMS, 0 TO 3 PERCENT SLOPES	PARNELL	Yes	pothole	2B3,3	YES	NO	YES
MAX-ARNEGARD-ZAHL LOAMS, 1 TO 6	MAX	No					
MAX-ARNEGARD-ZAHL LOAMS, 1 TO 6	ARNEGARD	No					
MAX-ARNEGARD-ZAHL LOAMS, 1 TO 6	NIOBELL	No					
MAX-ARNEGARD-ZAHL LOAMS, 1 TO 6	NISHON	Yes	pothole	2B3,3	YES	NO 	YES
MAX-ARNEGARD-ZAHL LOAMS, 1 TO 6	NOONAN TONKA	No Yes	pothole	2B3,3	YES	NO	YES
MAX-ARNEGARD-ZAHL LOAMS, 1 TO 6	TONICA	105	Potnoic	203,3	1115	l NO	1110
7-21-0-21-1	MAX	No					
	ARNEGARD	No					
	ZAHL	No					
	NIOBELL	No					
	NOONAN	No					
	TALLY TONKA	No Yes	pothole	2B3,3	YES	NO NO	YES
MnB:	IONKA	105	potnote	203,3	125	NO	IES
MAX-NIOBELL-NOONAN LOAMS, 2 TO 6 PERCENT SLOPES	MAX	No					
	NIOBELL	No					
	NOONAN	No					
	ARNEGARD	No					
	HEIL MIRANDA	Yes No	pothole	3,2B3	YES	NO 	YES
	NISHON	Yes	pothole	2B3,3	YES	NO	YES
	TONKA	Yes	pothole	2B3,3	YES	NO	YES
	ZAHL	No		, 			
MOA: MONDAMIN SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES	MONDAMIN	No					
	BRYANT	No					
	CAVO	No					
	NISHON	Yes	pothole	2B3,3	YES	NO	YES
MoB:	WILLIAMS	No					
MOB: MONDAMIN SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES	MONDAMIN	No					
2201 20	BRYANT	No					
	CAVO	No					
	NISHON WILLIAMS	Yes No	pothole	2B3,3	YES	NO	YES

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States"(USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote todetermine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Mara manulant and				Hydric soils criteria				
Map symbol and map unit name	Component	Hydric	Local landform	Hydric criteria code	Meets saturation criteria	Meets flooding criteria		
NaA: NIOBELL-NOONAN LOAMS, 0 TO 3 PERCENT SLOPES	NIOBELL	No						
	NOONAN BOWBELLS NISHON TONKA WILLIAMS	No No Yes Yes No	pothole	2B3,3 2B3,3	 YES YES	 NO NO	 YES YES	
NbA: NIOBELL-NOONAN-MAX LOAMS, 0 TO 3 PERCENT SLOPES	NIOBELL	No						
	MAX NOONAN ARNEGARD HEIL MIRANDA NISHON TONKA	No No No Yes No Yes Yes	pothole pothole pothole	2B3,3 2B3,3 2B3,3	 YES YES YES	 NO NO NO	 YES YES YES	
Nn: NISHON SILT LOAM NoA:	NISHON PARNELL	Yes Yes	pothole pothole	2B3,3 2B3,3	YES YES	NO NO	YES YES	
NOONAN-MIRANDA LOAMS, 0 TO 5 PERCENT SLOPES	NOONAN	No						
	MIRANDA ARNEGARD MAX NISHON TONKA WILLIAMS	No No No Yes Yes No	pothole	2B3,3 2B3,3	 YES YES	 NO NO	 YES YES	
Pa: PARNELL SILTY CLAY LOAM	PARNELL	Yes	pothole	2B3,3	YES	NO	YES	
Pp: PARNELL SILTY CLAY	HEIL PARNELL	Yes	pothole pothole	3,2B3 2B3,3	YES	NO NO	YES YES	
LOAM, PONDED	HEIL	Yes	pothole	2B3,3	YES	NO	YES	
PITS, GRAVEL	ORTHENTS, GRAVELLY	No						
RaA: RABER-CAVO COMPLEX, 0	PARNELL RABER	Yes No	pothole 	2B3,3	YES	NO	YES	
TO 2 PERCENT SLOPES	CAVO HEIL MIRANDA NISHON TONKA	No Yes No Yes Yes	pothole pothole pothole	2B3,3 2B3,3 2B3,3	YES YES YES	NO NO NO	 YES YES YES	
RaB: RABER-CAVO COMPLEX, 2 TO 6 PERCENT SLOPES	RABER	No						
TO O PERCENT SHOPES	CAVO HEIL MIRANDA NISHON TONKA	No Yes No Yes Yes	pothole pothole pothole	2B3,3 2B3,3 2B3,3	YES YES YES	NO NO NO	YES YES YES	

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Map symbol and				Hydric soils criteria				
map unit name	Component	Hydric	Local landform	Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteri	
Rh: RANSLO-HARRIET SILT LOAMS	RANSLO	No						
	HARRIET LA PRAIRIE	Yes No	flood plain	2B3 	YES	NO 	NO 	
TaA: TALLY FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	TALLY	No						
	BOWDLE	No						
	BRYANT	No						
	RUSO	No		 				
	WILLIAMS NISHON	No Yes	 pothole	2B3,3	YES	NO	YES	
TaB: TALLY FINE SANDY LOAM, 2 TO 6 PERCENT	TALLY	No						
SLOPES								
	BOWDLE	No						
	BRYANT RUSO	No No						
	WILLIAMS	No						
	NISHON	Yes	pothole	2B3,3	YES	NO	YES	
Tn: TONKA-NISHON SILT	TONKA	Yes	pothole	2B3,3	YES	NO	YES	
LOAMS	NISHON	Yes	pothole	2B3,3	YES	NO	YES	
	HEIL	Yes	pothole	2B3,3	YES	NO	YES	
	PARNELL	Yes	pothole	2B3,3	YES	NO	YES	
VaC:								
VIDA-WILLIAMS VERY STONY LOAMS, 2 TO 9 PERCENT SLOPES	VIDA	No						
	WILLIAMS	No						
	BOWBELLS	No						
	NIOBELL	No						
	NISHON NOONAN	Yes	pothole	2B3,3	YES	NO I	YES	
	TONKA	No Yes	pothole	2B3,3	YES	NO	YES	
VdC: VIDA-WILLIAMS- BOWBELLS LOAMS, 2 TO	VIDA	No						
9 PERCENT SLOPES	WILLIAMS	No						
	BOWBELLS	No						
	NIOBELL	No						
	NISHON	Yes	pothole	2B3,3	YES	NO	YES	
	NOONAN	No						
	TONKA ZAHL	Yes No	pothole	2B3,3	YES	NO 	YES	
w:	ראעדד	INO				_		
WATER	WATER (LESS THAN 40 ACRES)	Unrank ed						
WaD: WABEK LOAM, 9 TO 25 PERCENT SLOPES	WABEK	No						
			i .	1	1	1		

Map symbol and				Hydric soils criteria					
map unit name	Component	Hydric	Local landform	Hydric criteria code	Meets saturation criteria	Meets flooding criteria			
WbC: WABEK-BOWDLE LOAMS, 3 TO 9 PERCENT SLOPES	WABEK	No							
TO J THROHIT BHOTHS	BOWDLE TALLY	No No							
	ZAHL	No							
WnA:	211111	1.0							
WILLIAMS-BOWBELLS LOAMS, 0 TO 3 PERCENT SLOPES	WILLIAMS	No							
	BOWBELLS	No							
j	NIOBELL	No							
j	NISHON	Yes	pothole	2B3,3	YES	NO	YES		
j	NOONAN	No							
	TONKA	Yes	pothole	2B3,3	YES	NO	YES		
	ZAHL	No							
WnB: WILLIAMS-BOWBELLS LOAMS, 1 TO 6 PERCENT SLOPES	WILLIAMS	No							
PERCENT SLOPES	BOWBELLS	No							
		No							
	NIOBELL NISHON	Yes	pothole		YES	NO	YES		
		No	pornoie	3,2B3	1ES		IES		
	NOONAN				1		1		
	TONKA	Yes	pothole	2B3,3	YES	NO	YES		
	ZAHL	No							
WoA: WILLIAMS-BOWBELLS- NISHON COMPLEX, 0 TO 3 PERCENT SLOPES	WILLIAMS	No							
	BOWBELLS	No							
	NISHON	Yes	pothole	2B3,3	YES	NO	YES		
	NIOBELL	No							
	NOONAN	No							
	PARNELL	Yes	pothole	2B3,3	YES	NO	YES		
WoB:			⁻						
WILLIAMS-BOWBELLS- NISHON COMPLEX, 1 TO 6 PERCENT SLOPES	WILLIAMS	No							
	BOWBELLS	No							
	NISHON	Yes	pothole	3,2B3	YES	NO	YES		
	NIOBELL	No							
	NOONAN	No							
	PARNELL	Yes	pothole	2B3,3	YES	NO	YES		
j	ZAHL	No							
WpA: WILLIAMS-BOWBELLS- NOONAN LOAMS, 0 TO 3 PERCENT SLOPES	WILLIAMS	No							
I BICCENI DIOFED	BOWBELLS	No							
-	NOONAN	No							
	HEIL	Yes	pothole	2B3,3	YES	NO	YES		
	MIRANDA	No	pornore	ZB3,3	1ES		IES		
	NISHON	Yes	pothole	3,2B3	YES	NO	YES		

Map symbol and				Hydric soils criteria				
map unit name	Component	Hydric	Local landform	Hydric criteria code	Meets saturation criteria	Meets flooding criteria		
WpB: WILLIAMS-BOWBELLS- NOONAN LOAMS, 1 TO 6 PERCENT SLOPES	WILLIAMS	No						
	BOWBELLS NOONAN	No No						
	HEIL MIRANDA NISHON	Yes No Yes	pothole pothole	2B3,3 2B3,3	YES YES	NO NO	YES YES	
	TONKA ZAHL	Yes No	pothole 	2B3,3 	YES	NO 	YES 	
WtC: WILLIAMS-BOWBELLS- PARNELL COMPLEX, 1 TO 9 PERCENT SLOPES	WILLIAMS	No	pothole	3,2B3	YES	NO	YES	
	BOWBELLS PARNELL	No Yes	 	 				
	LEHR NIOBELL NOONAN	No No No		 		 	 	
	ZAHL TONKA	No Yes	 pothole	 2B3,3	YES	 NO	 YES	
WvB: WILLIAMS-BOWBELLS- VIDA LOAMS, 1 TO 6 PERCENT SLOPES	WILLIAMS	No						
	BOWBELLS VIDA NISHON	No No Yes	 pothole	 3,2B3	 YES	 NO	 YES	
	NOONAN TONKA ZAHL	No Yes No	pothole	3,2B3	YES	NO 	YES	
WwB: WILLIAMS-NIOBELL- NOONAN LOAMS, 3 TO 6 PERCENT SLOPES	WILLIAMS	No						
	NIOBELL NOONAN BOWBELLS MIRANDA NISHON	No No No No Yes	 	 2B3,3	 YES	 NO	 YES	
	TONKA ZAHL	Yes No	pothole pothole 	2B3,3 2B3,3	YES	NO NO	YES 	
WxC: WILLIAMS-VIDA- BOWBELLS STONY LOAMS, 2 TO 9 PERCENT SLOPES	WILLIAMS	No						
	BOWBELLS VIDA NIOBELL NISHON	No No No Yes	 pothole	 2B3,3	 YES	 NO	 YES	
	NOONAN TONKA ZAHILL	No Yes No	pothole	2B3,3	YES	NO	YES	

				H	ydric soils	criteria	
Map symbol and map unit name	Component	Component Hydric		Hydric criteria code	Meets saturation criteria	Meets flooding criteria	
WzD: WILLIAMS-ZAHILL- BOWBELLS LOAMS, 2 TO 15 PERCENT SLOPES	WILLIAMS	No					
IS I DICELLI DECI DE	ZAHILL	No					
	BOWBELLS	No					
	HEIL	Yes No	pothole 	2B3,3	YES	NO 	YES
	NIOBELL NOONAN	No No					
	PARNELL	Yes	pothole	2B3,3	YES	NO	YES
	TONKA	Yes	pothole	2B3,3	YES	NO NO	YES
ZaE:		100	Pochore	20373	120	110	125
ZAHILL LOAM, 15 TO 40 PERCENT SLOPES	ZAHILL	No					
	BOWBELLS	No					
	HARRIET	Yes	flood plain	2B3	YES	NO	NO
	RANSLO	No					
	VIDA	No					
7 ~ E •	WILLIAMS	No					
ZcE: ZAHILL VERY STONY LOAM, 6 TO 25 PERCENT SLOPES	ZAHILL	No					
	BOWBELLS	No					
	PARNELL	Yes	pothole	2B3,3	YES	NO	YES
	WABEK	No					
	WILLIAMS	No					
ZlD: ZAHILL-LA PRAIRIE COMPLEX, 2 TO 25 PERCENT SLOPES	ZAHILL	No					
TERCERT SECTES	LA PRAIRIE	No					
	BOWBELLS	No					
	HARRIET	Yes	flood plain	2B3	YES	NO	NO
	RANSLO	No					
	VIDA	No					
	WABEK	No					
7m.C.	WILLIAMS	No					
ZmC: ZAHL-MAX LOAMS, 6 TO 9 PERCENT SLOPES	ZAHL	No					
	MAX	No					
	LEHR	No					
	NIOBELL	No					
	NOONAN	No					
	TALLY	No					
7mD •	PARNELL	Yes	pothole	3,2B3	YES	NO	YES
ZmD: ZAHL-MAX LOAMS, 9 TO 20 PERCENT SLOPES	ZAHL	No					
	MAX	No					
	LEHR	No					
	MIRANDA	No					
	NOONAN	No					
	WABEK	No					
	PARNELL	Yes	pothole	2B3,3	YES	NO	YES

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Map symbol and				Н	ydric soils	criteria	
map unit name	Component	Hydric	landform	Hydric criteria code	Meets saturation criteria		

FOOTNOTE: There may be small areas of included soils or miscellaneous areas that are significant to use an management of the soil; yet are too small to delineate on the soil map at the map's original scale. These may be designated as spot symbols and are defined in the published Soil Survey Report or the USDA-NRCS Technical Guide, Part II.

Areas mapped as water or any map unit that contains one of the following conventional symbols is considered a hydric soil map unit: marshes or swamps; wet spots; depressions; streams, lakes and ponds.

- 1. All Histosols except Folists, or
- 2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Aquisalids, Pachic subgroups, or Cumulic subgroups that are:
 - a. Somewhat poorly drained with a water table equal to 0.0 foot (ft) from the surface during the growing season, or
 - b. poorly drained or very poorly drained and have either:
 - (1) water table equal to 0.0 ft during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches (in),
 - (2) water table at less than or equal to 0.5 ft from the surface during the growing season if permeability is equal to or greater than 6.0 in/hour (h) in all layers within 20 in, or
 - (3) water table at less than or equal to 1.0 ft from the surface during the growing season if permeability is less than 6.0 in/h in any layer within 20 in, or
- 3. Soils that are frequently ponded for long duration or very long duration during the growing
- 4. Soils that are frequently flooded for long duration or very long duration during the growing